



Food Security & Supply: Lessons from Iraq

Jonathan P Gressel
Former Agricultural Counselor
U.S. Embassy Baghdad
USDA Foreign Agricultural Service



Iraq – Food Security Environment

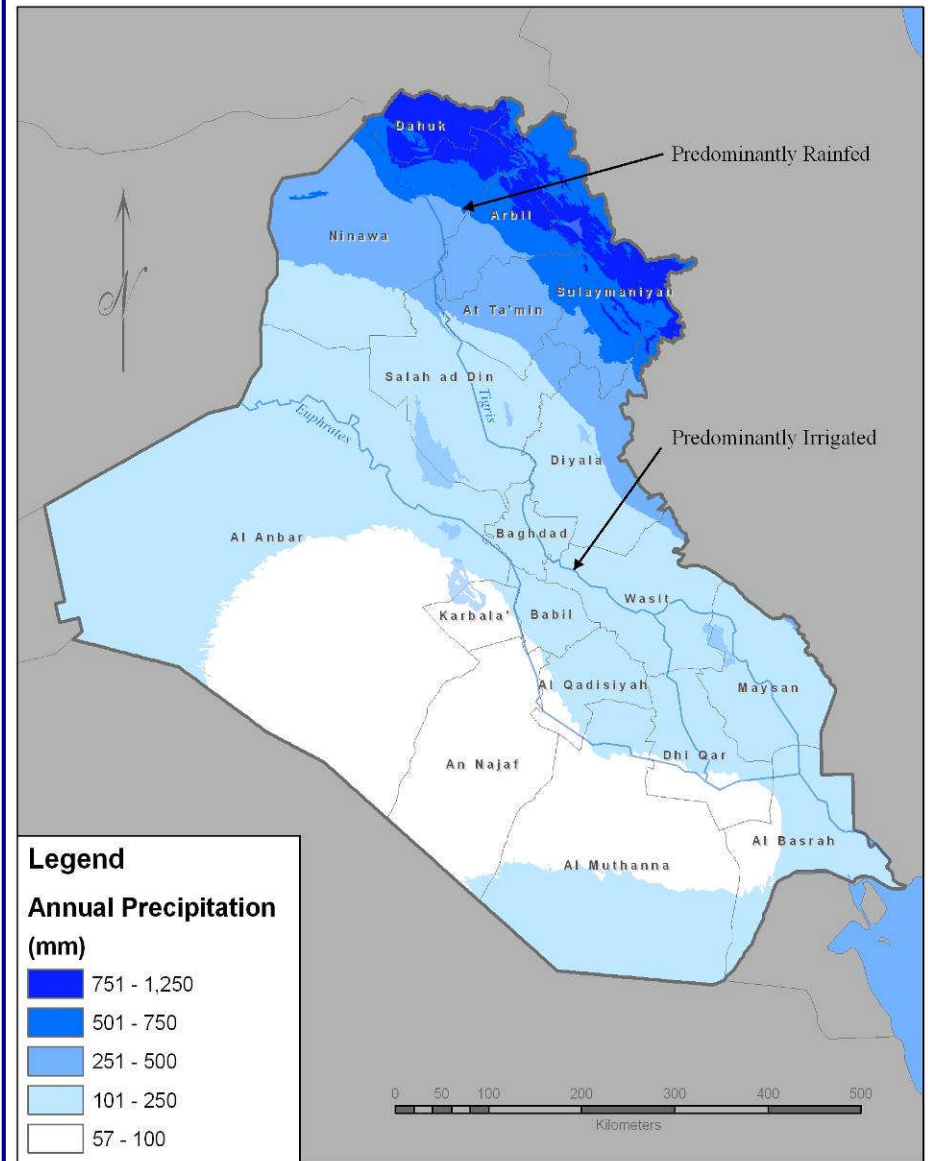
- Mesopotamia – the land between the two rivers, the Tigris and the Eupharates
- The origin of wheat and barley cultivation
- Dates, vegetables, fruit and sheep
- Grain exporter in 1950s and 1960s
- Currently, agriculture employs over 25% of the labor force and provides 10% of GDP

Primary Agricultural Regions in Iraq



Data Sources: Geocover LC; ESRI

Average Annual Cumulative Precipitation in Iraq



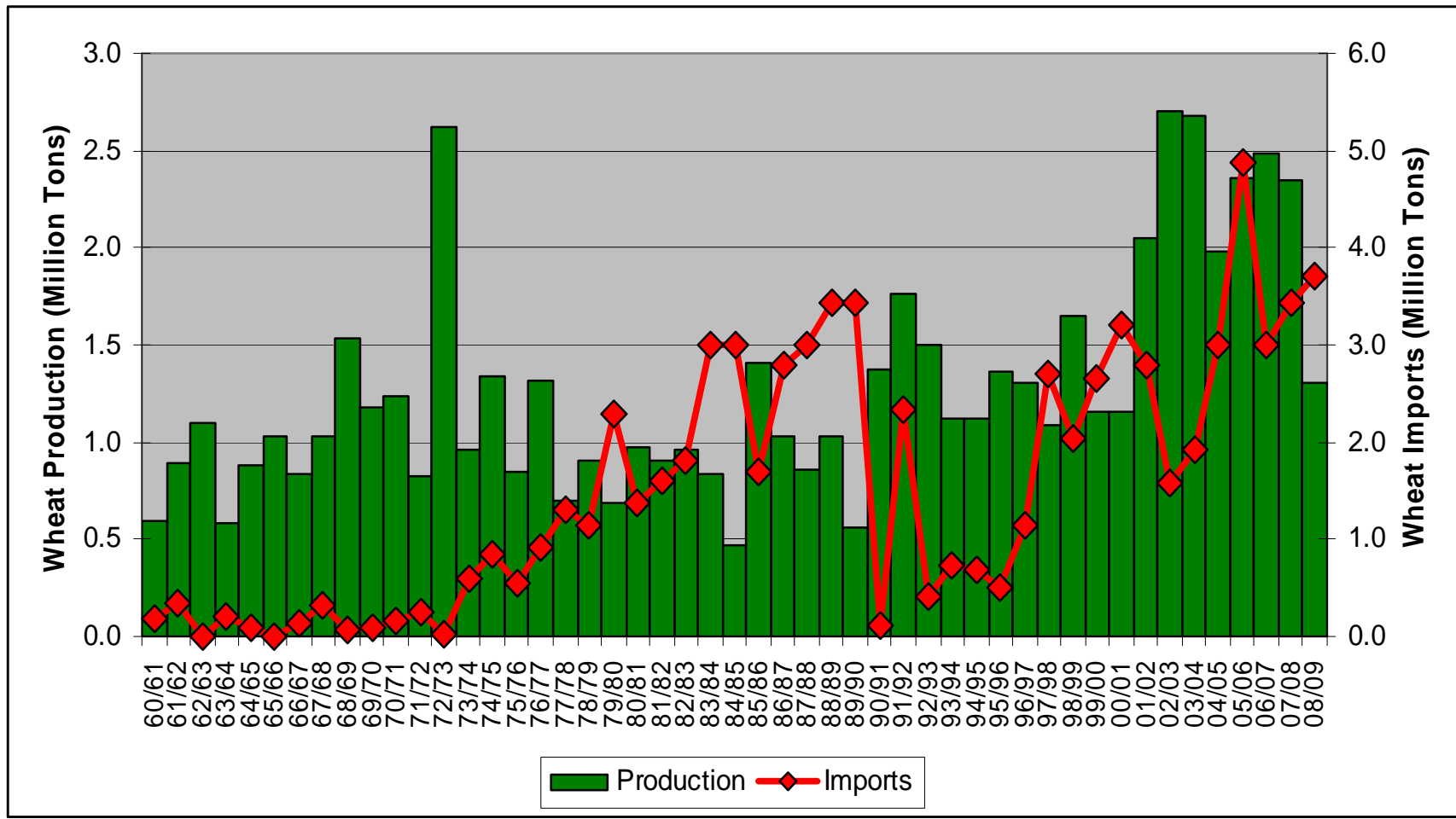
Data Sources: WorldClim v.1.4



Decline in Food Self-Sufficiency

- Baathist economic policies, the 1980-88 Iran-Iraq War, the Gulf War, and UN Sanctions diverted resources from agriculture and caused the misallocation of resources within the sector.
- The UN Oil-for-Food Program assisted with food supply through imports, and also increased investment in the grain supply sector. However, OFF increased dependency on the Public Distribution System.
- Post 2003, limited efforts to assist the agriculture sector, especially by the Government of Iraq.
- Decreasing water flows on Tigris and Euphrates due to major irrigation projects in Turkey and Syria..

Iraq Wheat Supply 1960-2008





Crop Forecasts in a Conflict Zone

- Normally – USDA/FAS develops crop estimates based on the work of our overseas Agricultural Attachés and FAS/W International Production Assessment Division Analysts.
- Host governments and the private sector normally have good, if not totally accurate information, if they are willing to share.
- Iraq presented a major challenge to this system.



USDA/FAS in Iraq

- In Baghdad - 2 FAS Foreign Service Officers, 6 Ministerial Advisers, 4 local staff, 3 Bicultural/Bilingual Advisers and 1 Liaison officer at Office of Provincial Affairs
- 27 Provincial Reconstruction Team Agricultural Advisers recruited from USDA and outside.
- Supported by FAS Office of Capacity Building and Development for technical assistance, scientific exchanges and recruitment.
- OGA for crop forecasting/analysis.
- OCRA on policy coordination.

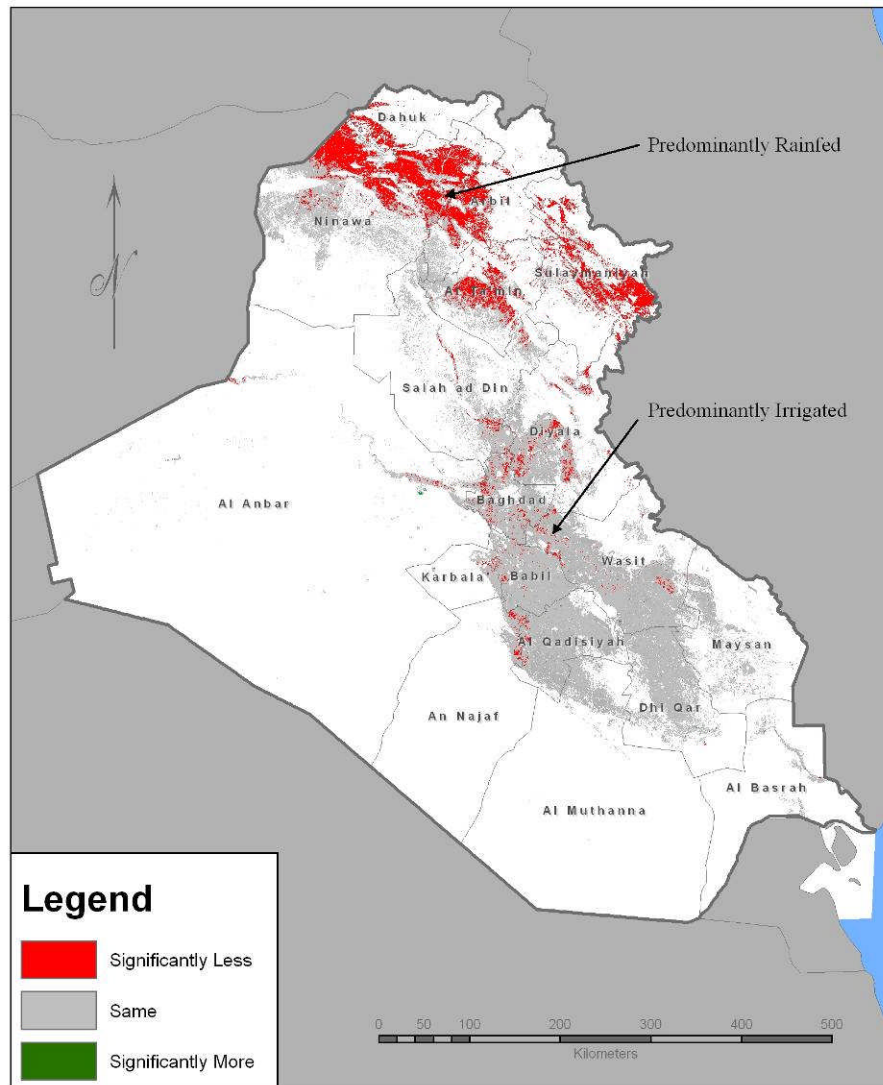
USDA and NGA Partnership



- In 2007, pilot project initiated by USDA/FAS and National Geospatial Intelligence Agency to develop new remote sensing processes for predicting harvests in regions with minimal ground truth.

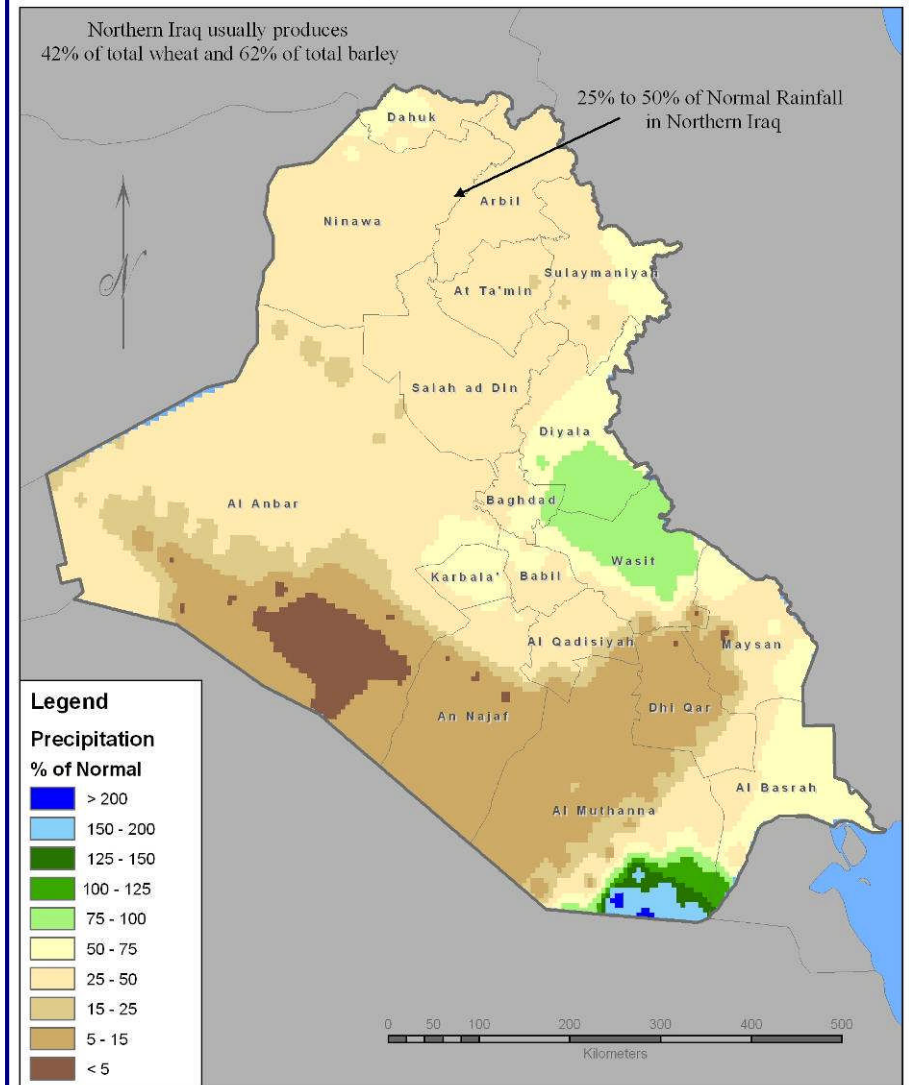
Drought Situation 2008 Crop

Cropland NDVI Departure from 5-Year Average (April 7th)



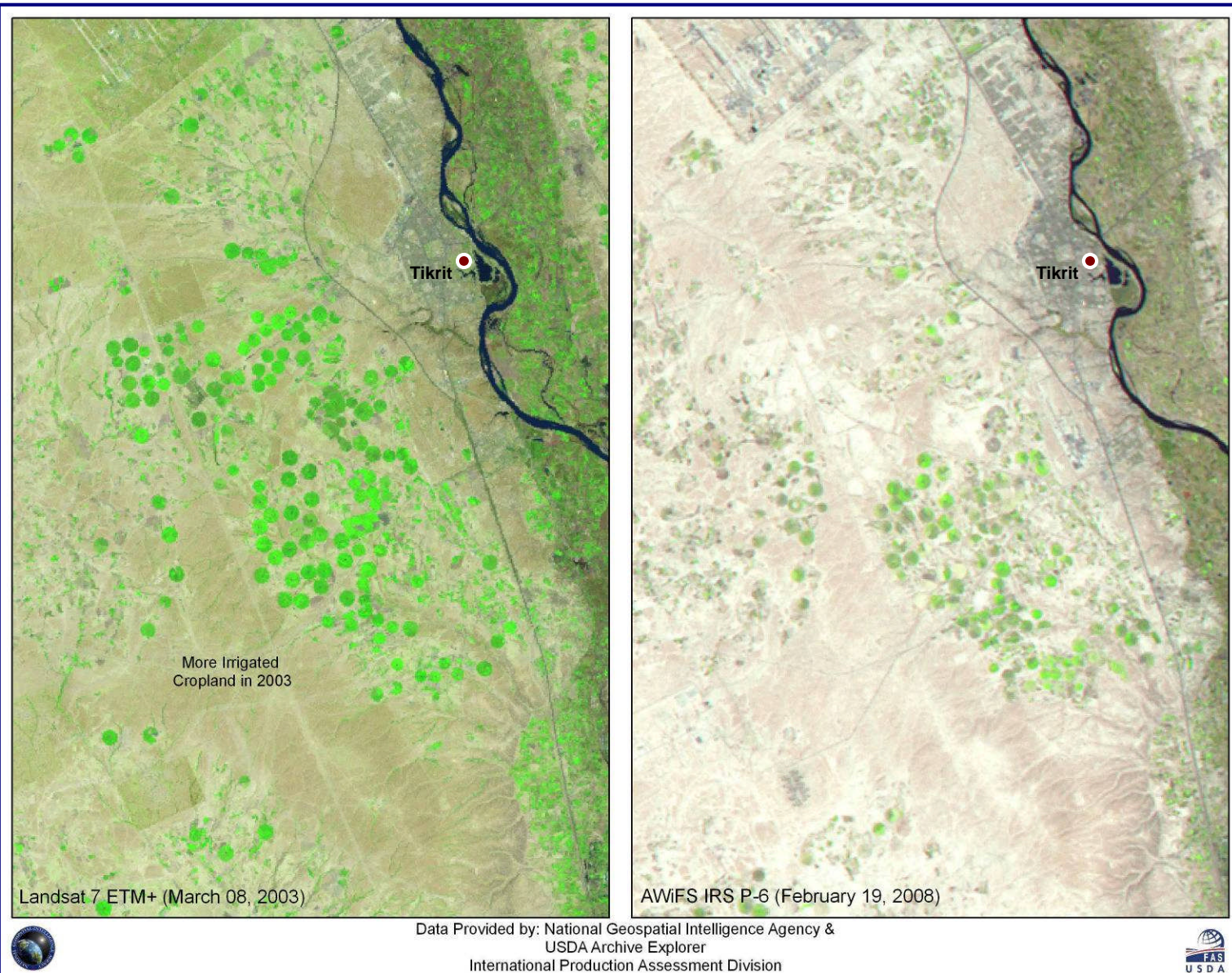
Data Sources: MODIS 250-meter NDVI

Percent of Normal Precipitation (Oct. 1, 2007 to Apr. 10, 2008)



Data Sources: MODIS 250-meter NDVI

Other Factors Affect Production





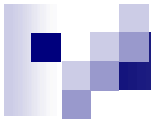
Political-Military Perspective

- In early 2008, the “Surge” was taking hold in Central and Western Iraq and spreading to Northern Iraq.
- Spike in world food prices was causing civil unrest in neighboring countries. Concerns over potential civil unrest in Iraq.
- When GOI talked of reducing Public Distribution System rations and coverage, Grand Ayatollah Ali Sistani came out publicly against any change.



Coalition Initiatives

- Agricultural Working Group set up ad hoc drought assessment and planning committee to assess potential impacts and suggest mitigation measures for military and civilian actors – USDA, USAID, State, MNF-I and MNC-I participated and consulted with GOI experts.
- Coalition military at the Division and Brigade level funded local initiatives.



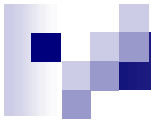
Impacting Iraqi Decision-Making

- In early 2008, FAS/Baghdad briefed the Ministers of Agriculture and Trade, the Ministry of Planning, the Deputy Prime Minister's Office and the National Assembly's Agriculture Committee.
- The GOI's Interministerial Drought Action Committee used USDA estimates and the Coalition drought assessment to assist in developing the GOI plan.



Iraqi Drought Mitigation Plan

- Make subsidized livestock feed available to farmers to preserve foundation of herd
- Make seeds available for 2008/2009 wheat crop
- Limit rice cultivation in Summer 2008
- Pay compensation to farmers for expenses.
- Negotiate with neighbors on stabilizing water flow on Tigris and Euphrates
- Assure adequate food and feed supplies by increasing imports



GOI Acts to Increase Food Supply

- Initial 2008 Budget had no increase in Public Distribution System funding - \$3.3 billion budget
- Ministry of Trade, aided by Embassy efforts, received an additional \$2.5 billion to fund the PDS in Supplemental Budget.
- Prime Minister's Ag Initiative - \$500 million



Importance of Logistics

- Iraq imports grain by ship via Basra port
- In late 2007/early 2008, worked with Ministries of Trade and Finance and DPM's Office to overcome freight payment crisis
- GOI military takeover of Port of Basra from Mahdi Army helped improve security and logistics and limit corruption
- Shifting of grain cargo from trucks to bulk trains due to repair of infrastructure/improved security.



Lessons Learned

- Grain crop estimation relying on remote sensing is feasible, but requires significant resources.
- Host country and partner experts need to identify problems and develop and implement mitigation measures. In Iraq, GOI implementation faltered.
- Increased food imports require better logistics and more financial resources.
- Need to plan for the following crop.

